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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/517,579	03/02/2000	Kazuya Hiratsuka	0059-1208-0	4777

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EXAMINER

NGUYEN, HA T

ART UNIT	PAPER NUMBER
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2812

DATE MAILED: 02/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action

Application No.

09/517,579

Applicant(s)

HIRATSUKA ET AL.

Examiner

Ha T. Nguyen

Art Unit

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--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 30 December 2002 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

PERIOD FOR REPLY [check either a) or b)]

- a) ☒ The period for reply expires 4 months from the mailing date of the final rejection.
- b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection. ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☒ A Notice of Appeal was filed on 09 December 2002. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
2. ☐ The proposed amendment(s) will not be entered because:
- (a) ☐ they raise new issues that would require further consideration and/or search (see NOTE below);
 - (b) ☐ they raise the issue of new matter (see Note below);
 - (c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
 - (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: _____

3. ☐ Applicant's reply has overcome the following rejection(s): _____.
4. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
5. ☒ The a) ☐ affidavit, b) ☐ exhibit, or c) ☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because: See attached.
6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.
7. ☒ For purposes of Appeal, the proposed amendment(s) a) ☐ will not be entered or b) ☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: _____

Claim(s) objected to: _____

Claim(s) rejected: 2-5,7-9,11-17 and 19-26.

Claim(s) withdrawn from consideration: _____

8. ☐ The proposed drawing correction filed on _____ is a) ☐ approved or b) ☐ disapproved by the Examiner.
9. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____
10. ☐ Other: _____

Response to Arguments

Applicants' arguments with regard to the rejections under 35 U.S.C. 103 have been fully considered, but they are not deemed to be persuasive for at least the following reasons.

Again, Applicants argued that Morimoto et al. (US Patent 4725927, hereinafter "Morimoto") "fails to disclose or suggest a method for producing an electric double layer capacitor 1) having the claimed organic solvent in the organic electrolyte, 2) having the claimed specific surface area of 100 to 3000m²/g of the carbonaceous material of the electrodes, and 3) which is maintained at reduced pressure after the voltage is applied as set forth in claims 5, 12, and 20". The examiner disagrees, contrary to applicants' argument, Morimoto discloses substantially all the above limitations.

Concerning the claimed organic solvent in the organic electrolyte, Morimoto discloses the use of an organic solvent comprising sulfolane solvent, chlorobenzene, and among other things propylene carbonate or butylene carbonate (see col. 2, lines 27-66), the claims require "a solvent selected from the group consisting of.....propylene carbonate, butylene carbonate...." in the list "a)", **or** "a solvent mixture of sulfolane and a solvent selected from....." in the list "b)", **or** "a solvent mixture of a sulfolane...." of the list "c)" (emphasis added). The use of the word "or" means that a solvent meeting the requirement of one of three lists "a)", "b)", or "c)" would meet the claimed solvent, Morimoto discloses as a solvent, propylene carbonate or butylene carbonate, Morimoto discloses a solvent meeting the requirement of the list "a)", in addition Morimoto also teaches the use of chlorobenzene in the electrolyte, as shown above. Note that the use of "contains" in the claims does not exclude the use of another solvent, for example sulfolane, in addition to the solvent meeting the requirement of the list "a)". Therefore, Morimoto does teach the claimed solvent.

Concerning the specific surface area of the carbonaceous material of the electrodes, Morimoto discloses a value of 2000m²/g which falls within the claimed range (see Examples 1 to 3). Note that this is a 103 rejection, not a 102 rejection, in an obviousness rejection the prior art does not have to disclose the exact claimed range (see MPEP 2144.05). Therefore, Morimoto does make obvious the limitation on the specific surface area from 100 to 3000m²/g.

Concerning the "maintained at reduced pressure after the voltage is applied" limitation, note that applicants' arguments are largely directed to what the cited references teach

individually. However, it is axiomatic that one cannot show nonobviousness by attacking references individually where the rejection, as here, is based on a combination of references. *In re Young*, 403 F.2d 754, 159 USPQ 725 (CCPA 1968); *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). For example, applicant argued that Morimoto does not disclose the use of a reduced pressure after the voltage is applied as here claimed. However, Wei et al. (US Patent 6152970, "Wei"), not Morimoto, is employed in the rejection to show that feature of the claimed process. Therefore the combined teaching of Morimoto and Wei do teach or make obvious all the limitations of the claims 5, 12, and 20. Besides, applicants' arguments concerning the effect of benzene or its derivative in the water removal is found irrelevant since this is not claimed. Whether or not Morimoto discloses the same objective as applicants in using benzene in the capacitor is immaterial because the claims only require the presence of benzene or its chlorine derivative, not what benzene or its chlorine derivative does. Applicants also argued, on pages 7-9, the effect of a continuous voltage and other features disclosed in the specification but not claimed, these features may be different from the teaching of the combined Morimoto and Wei, however they are irrelevant since the rejection is done on the claims not the specification. Besides, both Morimoto and Wei disclose the application of a voltage, the use of vacuum and electrolysis of water are disclosed in Wei with details (see Wei, col. 7, line 17-col. 8, line 26). Contrary to applicants' arguments, Wei teaches "**A fixed voltage can be applied** to the cell or the voltage can be cycled and /or applied in sequential steps.....Sequential application of voltage in steps and **cycling voltage can be used** to avoid current saturation **in some application** where an initial high voltage will cause a violent gas evolution that will destroy the cell" (see col. 8, lines 7-15) (emphasis added). The claims recite the application of a voltage, no details about whether the voltage has to be continuous, non-cycled. However, even if the voltage has to be fixed, the combined teaching of Morimoto and Wei still meet the claims because, as shown above, Wei does teach the use of a fixed (continuous) voltage.

Applicants also argued that there is no motivation to combine Wei with Morimoto. The examiner disagrees, at least for the effect of removing the water presence in the capacitor, a well known problem, capacitor made by the combined Morimoto and Wei's process would have

eliminate or at least reduce the problems caused by the presence of water in the double layer capacitor. Therefore, a person of ordinary skill in the art is motivated to combine Wei with Morimoto and the combined teaching of Morimoto and Wei does teach or make obvious all the limitations of the claims.

Applicants argued that Tsushima (JP 100041199) does not teach the environmental atmosphere where the voltage is applied. The examiner disagrees, Tsushima teaches the application of a voltage before and after the case is sealed, as stated in the rejection. As shown by Wei, the presence of water the capacitor causes problems and degrades the capacitor with time, a fact well known in the art. Because of the large effect of moisture in the performance of the capacitor, the use of dry atmosphere would have been obvious to ensure better control of the environment and repeatability of production because, in dry air, fluctuation in humidity would be eliminated.

Applicants argued that Grigortchak et al. (US Patent 5351164) does not pertain to a double layer capacitor having organic electrolyte as claimed. The examiner disagrees, Grigortchak teaches the invention is applicable for both organic and aqueous electrolyte (see col. 2, lines 7-12).

For the above reasons, the combination of Morimoto and Wei alone or with other reference does teach or make obvious all the limitations of the claims 2-5, 7-9, 11-17, and 19-26, the rejection of the claims was proper and should be sustained.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ha Nguyen whose telephone number is (703)308-2706 . The examiner can normally be reached on Monday-Friday from 8:30AM to 6:00PM, except the first Friday of each bi-week.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Niebling, can be reached on (703) 308-3325. The fax phone number for this Group is (703) 308-7722.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.



Ha Nguyen

Primary Examiner

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